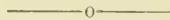


well as in the outer stays. The outer stay threads are positively demonstrative of the structure of the cocoon, even when not seen until after completion.

Among these Cecidomyian larvæ I observed the larvæ of two species of Chalcididæ (probably undescribed); subsequently I found the pupæ attached by their abdominal extremity to the leaf; they are of a pale yellow color; the imago develops a week or two after the *Cecidomyia*.

MT. CARROLL, Ill., August 24, 1867.



On a new Genus of APHIDÆ.

BY HENRY SHIMER, A. M., M. D.

HAMAMELISTES, nov. gen.

Anterior wing with two discoidal veins, the first one branched, the second simple. Posterior wing with one simple discoidal vein. Wings laid flat on the back in repose, extending much beyond the body. Body short. Honey-tubes small or obsolete. Antennæ short, three to five-jointed.



HAMAMELISTES CORNU, n. sp.*

Imago. Usually entirely black, abdomen sometimes brownish, especially beneath. Honey-tubes obsolete or not visible. Wings hyaline. Anterior wing rounded at the apex, first vein forked near the middle, bearing a long branch about parallel with the second vein; second vein aborted at its origin; stigma not very conspicuous, being a faint shade darker than the pale dusky intercostal space; costal vein heavy until

* Since the description of this species was in type, I observe, from the *Proceedings* of the Entomological Society, Vol. I, p. 305, that in the *N. Y. Cat. Homop.* Dr. Fitch has an Aphis, found in conical follicles on the upper surface of the Witch-hazel leaves, which he names *Byrsocrypta hamamelidis*. I have not been able to see a description of his insect, and it is not impossible that my *cornu* may be synonymous with his *hamamelidis*; but it appears improbable, as his species is placed under *Byrsocrypta*—a genus in which the front wing has three simple discoidals and the hind wing two discoidals, and the antennæ six-jointed, all of which characters do not accord with my insect. It appears to me that his insect, if it has a distinct existence, must accord with the characters he thus gives it, and the bare fact that it, like mine, inhabits a conical follicle on the upper side of the Witch-hazel leaf, is not, if I understand the rules of science, sufficient to induce me to withhold my description until perchance I might see his.

it attains the stigma, whence it is slender to the apex; subcostal or rib-vein very heavy during its entire length, slightly bent posteriorly at its junction with the first discoidal and stigmatic veins; stigmatic vein almost straight, slightly concave. Posterior wing with rib-vein strong; discoidal very slender, hook prominent, a faint dark spot at the termination of the rib-vein. Wings in repose extending one-half beyond the body. Antennæ three-jointed, first and second very short and globular; third five times as long as the other two, (under the microscope is seen to be composed of about 36 plainly visible, subequal, flat, appressed rings), apex abruptly pointed; the entire antennæ, in the several specimens examined, appear, under the microscope, to be quite smooth and free from hairs or spines, except the apex. Legs black or dark colored, almost entirely devoid of hairs or spines, a few hairs on the feet and tibiæ, especially the tarsal joints. Ocelli present.

Larva and pupa. Sub-clipsoidal; colors light brown to black; some sugary dust and liquid globules in the galls among the inhabitants. But I could not discover the honey-tubes.

Measurements of imago—length to tip of wings .10 inch. Wings .07 inch. Antennæ about .02 inch.

These insects inhabit obliquely conical or horn-like galls on the upper side of the leaf of *Hamamelis Virginica* (Witch Hazel), opening on the under side of the leaf; these galls are of a yellow or yellowish-white color at the present time, and of a firm leather-like consistency, the base standing anywhere in the parenchyma of the leaf; they are quite numerous, but I seldom find two on one leaf; usually not tapering below the middle, sometimes slightly contracted towards the base. These galls present quite a novel appearance on the leaves when numerous. Gall measurements—length $\frac{1}{2}$ — $\frac{7}{8}$ inch; diameter at the base $\frac{1}{8}$ — $\frac{1}{4}$ in.

HAMAMELISTES SPINOSUS, n. sp.

Imago. Body and members usually all entirely black in well matured specimens, in others sometimes brownish. Antennæ linear, smooth, five-jointed, the two basal joints subglobular, the other joints on short pedicles, third equal to the fourth and fifth, the last slightly shorter than the fourth. Wings horizontally folded in repose, hyaline when matured, when first developed silvery-white; stigma large, one-fourth the length of the wing, smoky-cinereous, veins greyish-black; the branch of the first vein rises at its lower third, rarely lower down, second vein variable, mostly abortive at its origin for more than one-third of its length, sometimes fully developed when it usually arises from the

angle of the rib-vein and the first discoidal, or a very short distance from the angle on the first discoidal, as I have observed in a good number of specimens, (in one specimen I observed it to rise from the stigmatic vein near its basal origin, and pass back with a short, paraboloid curve to its normal position); stigmatic vein nearly straight or slightly sinuous. Posterior wing comparatively large, the discoidal quite oblique and consequently long. Honey-tubes not seen. Legs with a few short hairs. Length of body .05—.06 inch; of wings .07—.10 inch; of antennæ .02—.025 inch.

Larva at first reddish, eventually brown and darker purplish, &c. Eggs reddish-brown.

Inhabits spiny galls, at the present time, on *Hamamelis Virginica* (Witch Hazel), from half to an inch long, of a sub-conoid or ellipsoidal form, narrowest at the base, very rough on the outside, and covered with numerous somewhat thorny spines, of frequently one-fourth of an inch in length; color leaf-green, thickly studded with small, reddish-brown glandular spots, inside smooth, greenish, and filled with numerous (a hundred or more) larvæ and imago, and a large quantity of whitish sugary dust and liquid secretions.

These galls are the transformed fruit; they open with a circular mouth and widening beveled or funnel-like exit of about one-fourteenth of an inch in diameter, in the conical base beside the stem. The Aphis in these galls are just beginning to develop into the winged state; while those in the above-named species, on the leaf, disappeared about a month ago; both are black. The most material difference noted is in the antennæ.

In this species I observed the second discoidal vein, in several specimens, developed to the basal origin; in the former species none; this second discoidal arising, as it does, from the first, as above noted, might almost, without impropriety, be considered a branch of the first discoidal. Moreover, between the galls of these two species, on the Witch Hazel, there is a marked difference, but if that could be explained on account of locality, from the other characters, I am still induced to believe that this is entitled to specific rank.

MT. CARROLL, Ill., August 24, 1867.